

PART THREE: GOALS, OBJECTIVES AND STRATEGIES FOR DROUGHT MANAGEMENT

03-01 State Guide Plan Context

“...there is a shared responsibility among state agencies, water suppliers, and municipal governments in responding to emergency situations...” Water Emergency Response Plan, 1993

This *Drought Management Plan* is the fourth State Guide Plan element concentrating on statewide water policy and is a specialized companion to *The Water Emergency Response Plan for the State of Rhode Island*, State Guide Plan Element 723. Many of the goals and policies contained in Elements 721 and 722, *Water Supply Policies for Rhode Island* and *Water Supply Plan for Rhode Island*, two plans which cover a broader range of policy, are also relevant to drought-related issues.

The *Drought Management Plan's* goals, objectives and strategies that follow are organized into two sections, one for short-term and one for long-term recommendations. The short-term section focuses on preparedness and management for a specific drought event. The long-term recommendations focus on ways to reduce the impact of future droughts on the state's water supply.

03-02 Drought Management Policies

Policies are the guiding principles that should be followed in attempting to achieve goals, objectives and strategies. The following policies are intended to guide both short and long-term drought management efforts.

1. Drought events must be managed through a coordinated and cooperative interagency response.
2. Sound water management that includes promotion of conservation, protection of natural resources and augmentation of supply should occur before the onset of a drought.
3. Ongoing public education and outreach should be a component in drought preparedness and management.
4. The Rhode Island Water Resources Board, advised by the Drought Management Steering Committee, shall lead statewide drought preparedness and drought response efforts.
5. Local water suppliers have primary responsibility for drought management within their supply districts and shall establish procedures for drought preparedness and drought emergency responses in their Water Supply Systems Management Plans.

6. Municipal governments have a key role, particularly in public education, local water conservation regulation, and enforcement and shall be assisted by state agencies and local water suppliers in developing coordinated response actions.

Water Emergency Response Plan, State Guide Plan 723 Context

The *Drought Management Plan* policies, goals and strategies should be viewed within the context of the four over-arching goals of *The Water Emergency Response Plan* which seeks to assure:

1. Protection of public health, safety and welfare;
2. Conservation of essential drinking water resources ;
3. The reasonable allocation of water supply; and
4. Support of essential and high priority water uses.

03-03 Short-term Goals, Objectives and Strategies

Goals:

1. Minimize the effects of drought on public health and safety, economic activity, and environmental resources.
2. Preserve the water supply of the state.

Objectives:

1. Ensure the reasonable allocation of supply during drought events through a coordinated and cooperative inter-agency response.
2. Conserve essential drinking water resources to maintain the continuity of water supply.
3. Provide support to essential and high priority uses, especially protection of public health, safety and welfare.
4. Manage available resources to sustain water-using industries and other economic activities to the extent practicable.
5. Manage available resources to sustain environmental values and wildlife habitats to the extent practicable.

03-03-01 Strategies for State Government

1. The Water Resources Board, as advised by the Drought Management Steering Committee, will manage a coordinated and cooperative inter-agency response to drought from the normal condition through the drought emergency stage.
2. The Water Resources Board shall coordinate efforts between the state agencies, municipal governments, school systems, and local water suppliers to assess drought risks and to develop programs, plans, and policies that mitigate the potential effects of drought.
3. The Water Resources Board, advised by the Drought Management Steering Committee, shall recommend specific actions and identify the necessary implementation authority to strengthen water conservation efforts within the state and to respond to drought from normal conditions through the drought emergency stage.
4. The Water Resources Board shall prepare post-drought mitigation evaluation reports and shall recommend amendments to this Plan to further drought mitigation in the state.

03-03-02 Strategies for Water Supply Systems

1. Water Supply Systems Management Plans (WSSMPs) shall be coordinated with the appropriate elements of the State Guide Plan and shall contain provisions in anticipation of drought that will direct suppliers to respond promptly and effectively.
2. WSSMPs must address how each supplier will manage its system during emergency conditions, including drought.
3. WSSMPs must address providing water under emergency circumstances and restoring water service as quickly as possible.
4. WSSMPs must address management of the system in preparation for and during drought.
5. WSSMPs must address the status of written agreements with other water systems, particularly emergency interconnection agreements.

03-03-02 Strategies for Municipal Government

1. Chief Elected Officials and Town/City Managers must be fully integrated into the drought management process in order to coordinate municipal government efforts during stages of drought preparation, water conservation and water emergencies.
2. Municipalities should consider adoption of local ordinances to provide guidance and regulations to manage drought at the community level.
3. Municipalities must coordinate with water supply systems, state officials and other municipalities who share their water systems to ensure that the WSSMPs properly address drought and emergency preparedness.
4. Municipal officials shall enforce both local regulations/restrictions and state emergency orders.

03-04 Long-Term Goals, Objectives and Strategies

Climate models predict increased occurrences of weather extremes in the future. Rhode Island can anticipate more frequent periods of drought. Consequently, whether or not Rhode Island is currently in a drought, the State needs to take steps to reduce vulnerability to periods of reduced precipitation. It is acknowledged that water suppliers and others are already required to implement policies and programs that address water conservation as part of their normal course of business.

The following long-term recommendations are categorized for actions relative to large consumers on public supplies, residential consumers on public systems, large consumers not on public supplies (i.e. on private wells or drawing from surface waters), and users of non-public water sources. They also target wastewater reuse, water rate changes, and policy and legislative actions. The Long-term Drought Management Task Force recommended in April 2002 that the concepts described in this plan receive immediate attention by the Water Resources Board and the General Assembly. As recognized earlier in this plan, oversight of Rhode Island's water supply is a shared responsibility that involves all levels of government and crosses lines of jurisdiction between a number of agencies.

Please note that for each major water use category the agents for strategy implementation are identified in parentheses.

Goal: Reduce Rhode Island's vulnerability to periods of low precipitation (or long-term drought).

Objectives:

1. Increase efficiency of water use.
2. Allocate high quality water first to uses that require that quality.
3. Establish programs to insure efficient use by all types of water consumers, with programs tailored to their situations.

03-04-01 Strategies for Large Consumers on Public Supplies (*Implementation: Major water suppliers & Water Resources Board*)

1. Implement the *Major Users Technical Assistance Program* (MUTAP) as established by current Water Resources Board regulations for WSSMPs, Section 8.05 (b) to accomplish the following:
 - a. Identify major users and their amount of use.
 - b. Request from major users descriptions of management practices that will best improve water efficiency.
2. Establish procedures to implement best management practices for the MUTAP to accomplish the following:
 - a. Regular reporting on progress toward implementation.
 - b. Assure that qualified and independent auditors conduct audits.
 - c. Stipulate a post-audit timeframe for major users to implement recommended audit provisions, consistent with their complexity and expense.
 - d. Charge excess water use at a higher rate, e.g. where actual water use is significantly higher than the water supplier's system management plan projected.
 - e. Allocate funds for excess usage to infrastructure improvements to the water systems.
3. The Water Resources Board shall report annually on the extent to which water supply systems have implemented 8.05(b) and related strategies described in items 1 and 2.
4. Evaluate the MUTAP to assess issues and constraints to effective implementation.

- 03-04-02 Strategies for Residential Consumers on Public Systems** *(Implementation: Large water suppliers & Water Resources Board)*
1. Implement provisions of the Water Resources Board regulations for WSSMPs, 8.05 (a) that include a plan for residential demand reduction.
 2. The Water Resources Board shall report annually on progress of required ten-year implementation program and how compliance can be improved.
 3. Evaluate reduction in residential water demand, especially for stressed systems.
- 03-04-03 Strategies for Large Consumers not on Public Supplies** (i.e. on private wells or drawing from surface waters) *(Implementation: Large consumers, DOH, DEM, Drought Steering Committee & Water Resources Board)*
1. Users shall demonstrate to suppliers that they have identified and are using Best Management Practices.
 2. The Water Resources Board should register large consumers and require them to meter and report their withdrawals. (Monthly withdrawals annually, and, in times of drought, monthly).
 3. Best Management Practices should be submitted to the Water Resources Board that provide for water use reduction in time of drought consistent with demand reduction targets for particular drought conditions. Reporting during a drought period should demonstrate compliance with these plans.
- 03-04-04 Strategies for Users of Non-public Water Sources** *(Implementation: Large consumers, DOH, DEM, Drought Steering Committee, Municipalities, Watershed associations & Water Resources Board)*
1. Promote water efficiency and drought mitigation strategies for those using private wells or surface waters that are not part of a public water distribution system.
- 03-04-05 Strategies for Wastewater Reuse** *(Implementation: DOH, DEM, Legislature & Water Resources Board)*
1. Establish programs for reuse (rather than discharge into receiving waters) of treated wastewater where it is of sufficient quality to be used for other purposes.
 2. Institute necessary studies to determine feasibility and identify mitigation measures for potential negative impacts of a statewide wastewater reuse program.
 3. Establish a formula to quantify the value of water that relates to the projected costs of producing, distributing and treating the water.

03-04-06 Strategies for Water Rates (Implementation: Large suppliers, Water Resources Board & Public Utilities Commission)

1. Public water systems should utilize water pricing as an incentive to reduce demand during periods of drought as follows:
 - a. Define drought indices and establish demand reduction actions for their systems in the WSSMPs.
 - b. Set demand reduction (percentage) goals for each stage of drought in the WSSMPs.
 - c. Implement rate changes when drought conditions appear in order to provide higher incremental rates for water usage which is in excess of demand reduction targets for each stage of drought. *(Suppliers subject to PUC rate jurisdiction have authority to institute such changes on an emergency basis during a drought, subject to later PUC review.)*
 - d. Notify customers when drought rates take effect and that those who reduce their usage by the required percentage **will not** have an increase in their water bill.
 - e. Notify customers that those who do not reduce usage during drought **will** pay a higher incremental rate for exceptional water usage.
2. For suppliers not under Public Utilities Commission rate jurisdiction, propose new legislation to require rate-setting policy similar to that outlined above.
3. Evaluate water rate structures used throughout the state in terms of conservation pricing and investigate other incentives to further reduce demand.

03-04-07 Strategies for Policy and Legislative Actions (Implementation: Water Resources Board & General Assembly)

1. Develop a water allocation policy consistent with *the Drought Management Plan* and as recommended by State Guide Plan 721, *Water Supply Policies*.
2. Explore legislation that may be needed to promote efficient water use by water users which are not using a public water supply system.
3. See Section F.2. Water Rates, above.